purchasing power from Dabhol project or just paying penalty as per the provisions of the Power Purchase Agreement; and

(d) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF POWER (SHRIMATI JAYAWANTI MEHTA): (a) Yes, Sir.

(b) As informed by the Maharashtra State Electricity Board (MSEB), the Board has purchased 3560 Million Units from Dabhol Power Company (DPC) from 13.5.1999 to 31.3.2000. The tariff payable to DPC is based on fixed charge and variable charge. The fixed capacity charge is payable based on the availability of the plant and does not depend on number of units purchased. Variable charge is payable based on variable O&M and fuel cost (Naphtha) and depends on number of units purchased. Based on above purchase, the average rate works out as Rs. 4.34 per unit.

(c) and (d) According to MSEB, they are regularly purchasing power from the Dabhol Power Company.

**Modernisation and Renovation of Hydro-Electric Plants**

1978. SHRI P.K. MAHESHWARI: Will the Minister of POWER be pleased to state:

(a) whether Government had started any scheme in 1987 to increase 500 mega watt hydroelectric capacity by modernising and renovating 55 hydro electric plants of the country; and

(b) if so, the details of the success achieved so far, plant-wise?

THE MINISTER OF STATE IN THE MINISTRY OF POWER (SHRIMATI JAYAWANTI MEHTA): (a) and (b) 55 hydro-electric schemes were identified in 1987 for Renovation, Modernisation and Uprating works to accrue a benefit of 2531 MW. Out of these, 25 hydro schemes have so far been completed with an actual benefit of 1402.7 MW against an expected benefit of 1313 MW. Plant-wise details of these schemes are given in Statement.

**Statement**

*Completed RM&U Hydro Schemes [Phase-I] [As on 30.6.2000]*

| Sl. No. | Name of Scheme | Installed Capacity (MW) | Est. Cost/ Actual Cost Rs. Crs. | Anticipated Benefits MW | Anticipated Benefits MU | Actual Benefits MW | Actual Benefits MU | Remarks |
|---|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| UPRATING & PREVENTION OF CAPACITY LOSS | | | | | | | | |
| 1. | Giri H.P. | 2×30 | 9.85/7.90 | 6 | 28 | — | — | Uprating could not be achieved. Reason not known. |
| 2. | Nagjhari (U-2) Karnataka | 6×135 | 11.97/11.32 | 15 | — | 15 | — | Unit 2 was uprated from 135 MW to 150 MW. |
| 3. | Ganguwal (U-2) BBMB | 2×24.2+ 1×29.25 | 18.90/15* | 3.43<br>24.20 | 27.98<br>217.50 | 27.63 | — | Unit 2 has been uprated from 24.2 MW to 27.63 MW and also life extended. *Exp. till 12/97. |
| 4. | Kotla (U-3) BBMB | 2×24.2+ 1×29.25 | 18.90/16.90* | 3.92<br>24.20 | 31.98<br>217.50 | 28.12 | — | Unit 3 has been uprated from 24.2 MW and 28.12 MW and also life extended. *Exp. till 9/98. |
| 5. | Sharavathy (U9&10) Karnataka | 2×89.1 | 17.96/14.68* | 47.9 | — | 47.9 | — | Unit 9 was uprated from 89.1 MW to 103.5 MW while Unit 10 was uprated from 70 MW to 103.5 MW. *Exp. till 3/98. |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|
| 6. | Sharavathy (U1to8) Karnataka | 8×89.1 | 65.00/63.49* | 115.2<br>178.2 | — | 471.6 | | All the units have been uprated from 89.1 MW to 103.5 MW. |
| 7. | Baira Siul NHPC | 3×60 | 25.90 | 18.00 | 85 | 18 | | Units were uprated from 60 MW to 66 MW. |
| 8. | Hirakud-I (U1&2) OHPC | 2×37.5 | 90.26/93.88* | 22.5<br>75.0 | 28.0<br>247.0 | 97.0 | | Both the Units uprated from 37.5 MW to 49.7 MW. Life extended by 25 years. *Exp. till 5/2000. |
| 9. | Tiloth U.P. | 3×30 | 8.02/5.513* | 9 | 55 | 6 | 25 | Each unit was uprated by 2 MW. *Exp. till 5/99. |
| 10. | Koyna I & II Maharashtra | 4×65+4×75 | 38.53/74.91* | 280 | 1360 | 300 | — | All the units were uprated by 5 MW. Life of all units extended by 25 years. *Exp. till 9/99. |
| RESTORATION | | | | | | | | |
| 11. | Ukai (U1&3) Gujarat | 4×75 | 20.17/24.99 | 75.0 | 43.0 | 75.0 | — | Unit 1 & 3 restored and uprated by 9 MW each. |
| 12. | Chenani J&K | 5×4.66 | 11.00 | 0.93 | — | 0.93 | — | Restored. |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|
| 13. | UBDC-I Punjab | 3×15 | 11.00/8.00 | 11.0 | 146.26 | 11.0 | — | Uprating achieved. |
| 14. | Kadamparai (U3&4) Tamil Nadu | 4×100 | 23.17/33.69 | 200 | 61 | 200 | — | Two units restored which were damaged due to fire accident. |
| 15. | Khandong (U1) NEEPCO | 2×25 | 0.62/0.62 | 25.0 | 108.0 | 25.0 | — | Unit 1 was restored. |
| 16. | Dehar (U2,3&4) BBMB | 6×165 | 46/10.74 | 25.00 | — | 25.0 | | Unit 2 restored to its rated capacity. Work on Unit 3&4 will taken in R&M Phase-2 as these are working satisfactorily. |
| PREVENTION OF CAPACITY LOSS | | | | | | | | |
| 17. | Shivasamudram Karnataka | 6×3+4×6 | 8.00 | 18.00 | 90.0 | 18.0 | — | Life extended. System was put in parallel with existing grid. |
| 18. | Moyar Tamil Nadu | 8×12 | 1.62/1.3 | 36.0 | 115.0 | 36.0 | — | Life extended. |
| 19. | Rihand U.P. | 6×50 | 1.43 | 100.0 | 287.0 | — | — | Due to financial constraints work was limited to renovation of intake & draft tube gates which were in operative. |
| RENOVATION | | | | | | | | |
| 20. | Sholayar Kerala | 3×18 | 7.5/5.725 | — | — | — | — | Reliability increased. |
| 21. | Kundah-III (U1&2) Tamilnadu | 3×60 | 5.45/3.2 | — | 8.12 | — | — | Life of turbine increased. Efficiency increased by 3.5%. |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|
| 22. | Sholayar-I Tamilnadu | 2×35 | 1.40/0.85 | — | 91.80 | — | — | Life of generator increased. |
| 23. | Gumti Tripura | 3×5 | 17.50/17.50 | — | 5.6 | — | — | Water Conductor system was augmented. |
| 24. | Koyna-III (U10/12) Maharashtra | 4×80 | 0.8/4.65* | — | — | — | — | Renovated. *Exp. till 9/97. |
| 25. | Chilla U.P. | 4×36 | 4.26/4.1136* | — | 15 | — | 15 | Reliability increased. Forced outages reduced. *Exp. till 5/99. |

Expected Benefit from 25 schemes = 1313 MW
Actual Benefit from 251 schemes = 1402.7 MW